

I 43063-66

ACC NR: AT6006699

0

and Taymyr Peninsulas; 2) anticyclones moving over the western half of the Arctic southward toward the European territory of the Soviet Union; their regions of formation are Greenland and the eastern sector of the Arctic; 3) anticyclones also moving over the western half of the Arctic but toward the east and northeast; their regions of formation are the northern Atlantic and Scandinavia; 4) stationary anticyclones regardless of the region of stationing. The height of the pressure formation was determined from 850-, 700-, 500-, 300-, and 200-mb constant-pressure charts. It was found that among the moving anticyclones those of group 1 have the greatest recurrence and the other groups have an appreciably smaller recurrence. Anticyclones of group 2 are observed regardless of the season of the year, whereas anticyclones of group 3 are noted primarily during the summer. The highest formations are the stationary anticyclones which is apparently explained by their being warm, thermally homogeneous pressure formations. The vertical extent of anticyclones in the groups 2 and 3 depends upon the region of their formation. Thus it was found that the anticyclones moving in the Arctic, especially in its eastern half, regardless of the season of the year are high in more than half of the cases. The cyclones moving over the eastern and central sectors of Soviet Arctic were also divided into four groups: 1) cyclones moving from the Pacific Ocean northwestward and northward; 2) cyclones moving from Siberia northeastward and northward; 3) those moving from the western sector of the Arctic to the east through the central sector; 4) stationary cyclones regardless of the region of stationing. It was found that the recurrence of cyclones, just as anticyclones, depends upon the season of the year and the region of their formation.

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Cyclones of the group 1 are observed primarily during the winter in high latitudes. Cyclones of group 2 are observed primarily during the summer and fall when the activity of the frontal zones over the Atlantic and Pacific Oceans has weakened. The greatest recurrence of high cyclones is observed among those of group 3. More than 70% of cyclones of this group reach a surface level of 200 mb. Thus the author concludes that the stationary cyclones and anticyclones in the Arctic are high pressure formations which are traced within the entire troposphere regardless of the season. The moving cyclones and anticyclones are also high pressure formations, however, their vertical extent depends upon their path and region of formation. Orig. art. has: 4 tables and 2 figures.

SUB CODE: 04,08/ SUBM DATE: 04Jun64/ ORIG REF: 010/ OTH REF: 000

Card 3/3

L 41592-66 EWT(m)/T/ERP(t)/ETI IJP(c) JD/JG

ACC NR: AP6018544

SOURCE CODE: UR/0181/66/008/006/1811/1818

AUTHOR: Gavriluk, V. M.; Medvedev, V. K.

ORG: Institute of Physics, AN UkrSSR, Kiev (Institut fiziki AN UkrSSR)

TITLE: Investigation of the adsorption of lithium on the surface of single-crystal tungsten in a field-emission projector

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1811-1818

TOPIC TAGS: lithium, work function, field emission, adsorption, surface property, tungsten, temperature dependence

ABSTRACT: The purpose of the investigation was to obtain data on the work function and the heat of absorption as functions of the concentration of the adsorbed atoms at temperatures so low that there is no surface migration of the atoms even over distances of the order of several interatomic distances. To this end, the authors investigated the adsorption of Li on the (110), (111), (112), and in part also (100) faces of single-crystal tungsten in a field-emission projector. The work function was measured by a method first developed by E. Muller (J. Appl. Phys. v. 26, 732, 1955 and earlier) with an electromagnetic deflection system used to permit measurements of the work functions of different faces. The plot of the work function against the concentration  $\phi(n)$  varies with the crystal face, is practically independent of  $n$  at 112K, but turns into a curve with a minimum at 77K. In the case of the (110) face the value of  $n$  at the minimum is  $(4.7 \pm 0.3) \times 10^{14} \text{ cm}^{-2}$ . Irreversible changes in

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L 41592-66

ACC NR: AP6018544

the work function curve are observed when the crystal is heated between 112 and 167K. The results can be attributed to the presence of two processes - chemisorption at  $n < 4 \times 10^{14} \text{ cm}^{-2}$ , and formation of a metallic film in the case of larger  $n$  and superimposed on the first process. The irreversible temperature changes are apparently connected with changes in the structure of this film. Orig. art. has: 6 figures.

SUB CODE: 20/ SUBM DATE: 09Nov65/ ORIG REF: 019/ OTH REF: 013

Card 2/2

L 35215-66 ENT(d)/FSS-2

ACC NR: AP5028759

(A)

SOURCE CODE: UR/0018/65/000/009/0081/0083

AUTHOR: Gavrish, L. (Colonel)

ORG: none

TITLE: A complex air defense situation

SOURCE: Voyenny vestnik, no. 9, 1965, 81-83

TOPIC TAGS: antiaircraft defense, antiaircraft fire control system, bomber aircraft, fighter aircraft, *RADAR DETECTION, ATTACK BOMBING*

ABSTRACT: A tactical exercise involving an antiaircraft unit and enemy aircraft is described. The problem of differentiating between friendly and enemy aircraft on the radar screen is discussed in detail and a number of guidelines are given: (1) if a fighter appears on the radar screen during an enemy bomber attack, it is probably a Soviet fighter; (2) bombers and fighters fly at different speeds; (3) on their way to their target, enemy aircraft do not tend to execute sharp-angle maneuvers--an aircraft so doing would presumably be a Soviet fighter-interceptor. The problem of tracking and destroying enemy aircraft flying at low altitudes is also discussed; here, in addition to raising the radar antenna and firing at a fixed altitude, fire control officers resorted to visual tracking with binoculars. The article also describes measures taken by the antiaircraft unit when the enemy jammed the radar. Orig. art. has: 2 figures.

SUB CODE: 15,19<sup>17</sup>

SUBM DATE: none

Cord 1/1 100-

L 57548-65 EWT(1)/FCG GW  
ACCESSION NR: AT5017504

UR/3116/65/273/000/0100/0131

AUTHOR: Gavrilova, L. A.

TITLE: Characteristics of tropospheric jet streams in the high latitudes

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Trudy, v. 273, 1965, Klimatologiya i radiatsionnyy rezhim Arktiki; sbornik statey (Climatology and radiation conditions of the Arctic), 100-131

TOPIC TAGS: Arctic wind, jet stream, tropospheric wind, Arctic jet stream, temporal jet stream

ABSTRACT: This paper represents the first Soviet attempt to analyze the vertical and time-wise distribution of jet streams over the entire Arctic. The data used were obtained primarily from radio-pilot balloon soundings in the troposphere over 35 Soviet and foreign polar stations during the period July 1957—December 1960, and from drift stations between January 1955 and December 1960. A force of 30 m/sec or above was adopted as the criterion for defining a jet stream. The period of observation, the maximum wind velocity and its direction, the height at which it was observed, and the vertical thickness of the jet stream layer were determined at each station. The area was divided into seven geographical sectors, and the data

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L 57548-65

ACCESSION NR: AT5017504

were averaged for each sector and plotted on charts. Charts of the average height and intensity of tropospheric jet streams for the four seasons are given in the text. Extensive appendixes give the following data: maximum jet stream velocity (Appendixes I—IV), winter-summer differences in average jet stream velocity (Appendix V), and the vertical distribution of the level of maximum wind velocity (Appendixes VI—IX). Vertical time-wise atmospheric profiles are given for two stations (see Fig. 1 of the Enclosure). Orig. art. has: 4 figures and 6 tables.

[ER]

ASSOCIATION: Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut  
(Arctic and Antarctic Scientific Research Institute)

SUBMITTED: 00

ENCL: 01

SUB CODE: ES

NO REF SOV: 006

OTHER: 000

ATD PRESS: 4039

Card 2/3

L 57548-65

ACCESSION NR: AT5017504

ENCLOSURE: 01

0

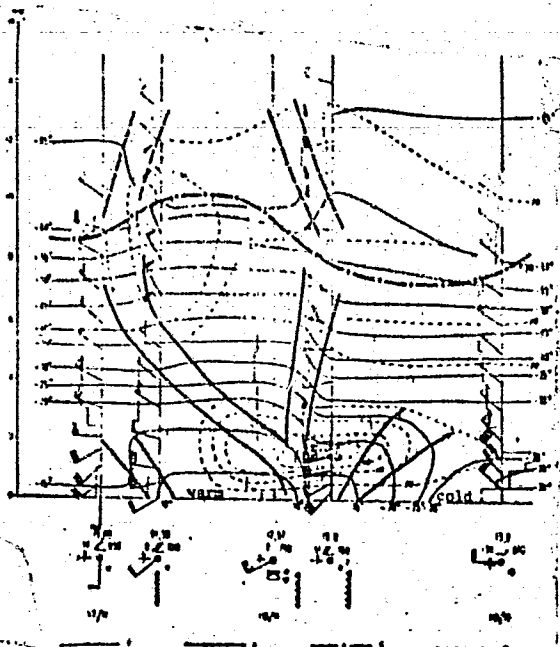


Fig. 1. Vertical time-wise profile of the atmosphere from the Khatanga Station data for the period 17—19 February 1959

1 - Isotherms; 2 - fronts;  
3 - tropopause; 4 - iso-  
tachs.

Card 3/3

*GAVRILOVA, L.D.*

S/081/62/000/006/069/117  
B149/B108

AUTHORS: Obolentsev, R. D., Timofeyev, V. D., Ratovskaya, A. A.,  
Baykova, A. Ya., Rafikova, L. G., Gavrilova, L. D.

TITLE: Group-composition of organic sulfur compounds in petroleum  
from the Bashkirskaia ASSR

PERIODICAL: Referativnyi zhurnal. Khimiya, no. 6, 1962, 527, abstract  
6X135 (Sb. "Khimiya svergaorgan. soyedineniy, soderzhashchikh-  
ya. v neftyakh i nefteproduktakh. v. 4", M., Gosoptekhniz-  
dat., 1961, 103 - 112)

TEXT: The total sulfur, sulfide and elemental sulfur content of crude  
petroleum from various deposits were determined, the former by double  
combustion, the two latter by anode polarography with solid electrodes.  
In addition, the distribution of organic sulfur compounds according to  
fractions with onset of boiling at 120, 120 - 200, 200 - 250, and 250-300°C  
from a series of petroleum was studied. The sulfide sulfur in the  
fractions was determined by the iodine complex method, the mercaptan  
sulfur by the Griggs method. Elemental sulfur was found in only one of  
Card 1/2

Group-composition of ...

S/081/62/000/006/069/117  
B149/B108

54 analyzed petroleum (Stolyarovskoye deposit) amounting to 0.0200% its content increases with increasing boiling temperature of the fraction. The sulfide sulfur constitutes 20-40% of the total sulfur content. A considerable amount of mercaptan sulfur was found in the light petroleum products of the Ishimbay deposits (for Terekla Arta petroleum well No. 531. 92.5% in the fraction with onset of boiling at 120°C, 85% in the 120-200°C fraction, 63% in the 200 - 250°C fraction and 47.5% in the 250 - 300°C fraction). Mercaptans are practically absent from the fractions of Devonian petroleum of the Shpakovskoye, Serafimovskoye and other deposits, as well as in the North-Western deposits. [Abstracter's note: Complete translation.]

Card 2/2

L 41590-65 EWT(m)/EPF(c)/T Pr-4 WE

ACCESSION NR: AT5008637

S/2933/64/007/000/0256/0259

AUTHORS: Obolentsev, R. D. (Doctor of chemical sciences); Gavrilova, L. D.;  
Bulatova, B. T.

21  
23  
B+1

TITLE: Determination of disulfide sulfur in petroleum products

SOURCE: AN SSSR. Bashkirskiy filial. Khimiya soraorganicheskikh soyedineniy,  
soderzhashchikhsya v neftyakh i nefteproduktakh, v. 7, 1964, 256-259

TOPIC TAGS: benzene, kerosene, petroleum, polarographic analysis, dielectric  
permeability, sulfur/ LP 55 polarographic system

ABSTRACT: The disulfide content in benzene and kerosene petroleum products distil-  
lates was determined by the polarographic method. Various solutions of Walden salts  
and lithium chlorides were used as the base electrolyte. The best solvent was  
found to be 0.015M solution of tetramethylammonium iodide in dimethylformamide.  
This solvent has a high dielectric permeability and dissolves petroleum products  
satisfactorily. A total of eight disulfide half-wave potentials were recorded and  
the disulfide sulfur content of petroleum distillates was determined with a con-  
centration of 0.005 to 0.15% by weight. Synthetic dibutyl-disulfide and diphenyl-  
disulfide solutions were prepared in petroleum fractions containing no disulfide  
sulfur. The new disulfide content was determined by the polarographic method.

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L 41590-65

ACCESSION NR: AT5008637

Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Institut organicheskoy khimii BashFAN SSSR (Institute of Organic Chemistry, Bashkirskiy Branch, AN SSSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: FP

NO REF SOV: 004

OTHER: 001

*ml*  
Card 2/2

GAVRILOVA, L.D.

Comparison of the recordings of total radiation by a Robitzsch  
actinograph and a thermoelectric heliograph. Trudy GGO no.160:  
54-59 '64. (MIRA 17:9)

GAVRILOVA, L.I.

Oxidizability of arsenide ores in the weathring surface. Trudy  
Gor.-geol. inst. UFAN SSSR no. 42:121-128 '59. (MIRA 14:2)  
(Arsenides) (Weathering)

GAVRILOVA, L.K.; TURANSKAYA, N.V.

Distribution of rare earths in rock-forming and accessory minerals  
of some granites [with summary in English]. Geokhimiia no.2:124-129  
'58. (MIRA 12:4)

1. V.I. Vernadskiy Institute of Geochemistry and Analytical  
Chemistry, Academy of Sciences, U.S.S.R., Moscow.  
(Kirovograd region--Granite) (Rare earths)

GAVRILOVA, L. K.; LUCHANSKAYA, Ye. G.

Metastases of cervical cancer to the heart following combined  
radiation therapy. Akush. i gin. 38 no.3:112-113 My-Je '62.  
(MIRA 15:6)

1. Is Saratovskogo gorodskogo onkologicheskogo dispansera  
(glavnyy vrach O. P. Kolesnik)

(UTERUS—CANCER) (HEART—CANCER) (RADIOTHERAPY)

GAVRILOVA, L.

PA 55/49T61

USSR/Medicine - Muscles, Physiology      Dec 48  
Medicine - Drugs, Effect of

"Contractures of Transverse Striated Muscles Due  
to the Action of Hypotonic Solutions," L.  
Gavrilova, Physiol Inst, Leningrad State U, 4pp

"Dok Ak Nauk SSSR" Vol 141, No 5

Law governing other irritants is shown to apply  
to the action of hypotonic solutions on muscles.  
Appearance of hypotonic contractures due to cer-  
tain doses of irritant permits considering  
hypotonic narcosis as refractivity of a stable  
stimulation caused by hypotonia. Submitted by  
Acad K. M. Bykov 14 Oct 48.

55/49T61

GAVRILOVA, L.N.

Role of cervical sympathetic nerves in the secretory function of the posterior pituitary. *Fiziol. zh. SSSR* 38 no.4:465-470 July-Aug 1952.  
(CINL 23:2)

1. Laboratory of Nervous Trophism, Institute of Physiology imeni I. P. Pavlov, Academy of Sciences USSR, Leningrad.

GAVRILOVA, L.N.

Studies on neurohumoral regulation of function of the posterior pituitary. *Fiziol. zh. SSSR* 39 no.3:352-356 May-June 1953. (CML 25:1)

1. Laboratory of Nervous Trophism of the Institute of Physiology imeni I. P. Pavlov of the Academy of Sciences USSR.

GAVRILOVA, L.N.

Effect of a super strong extraneous stimulus on motor conditioned reflexes. Zhur.vys.nerv.deiat. 4 no.5:699-704 8-0 '54. (MLRA 8:7)

1. Fiziologicheskoy otdel im. I.P.Pavlova Instituta Eksperimental'noy meditsiny AMN SSSR.

(REFLEX, CONDITIONED,  
eff. of light heterologous stimulus)

GAVRILOVA, L. N.

2)

Individuality of hormones of the posterior part of hypophysis. L. N. Gavrilova (I. P. Pavlov Physiol. Inst., Acad. Sci. U.S.S.R., Leningrad). *Physiol. Zhur. S.S.S.R.* 40, 60-4(1964).—It is shown that 15-30-min. elec. stimulation of the neck nerves of the cat leads to appearance in the spinal fluid of vasopressin which remains for 4-6 hrs., while after 4.5 hrs. oxytocin appears and remains in the fluid 11-12 hrs. Histamine administered 2.5 hrs. after stimulation blocks the secretion of vasopressin; administered 4.5 hrs. after stimulation, it blocks oxytocin secretion. Thus the two hormones are distinct entities. G. M. Kosolapoff

USSR/Human and Animal Physiology - The Nervous System.

V-10

Abs Jour : Ref Zhur - Biol., No 2, 1958, 9055

Author : L.N. Gavrillova

Inst : Institute of Experimental Medicine of the Academy of Medical Sciences of the USSR

Title : Characteristics of the Delayed Reflex to a Complex Conditioned Stimulus in Relation to the Canine Type of Nervous System.

Orig Pub : Yezhegodnik. In-t eksperiment. med. Akad. med. nauk SSSR, 1955 Leningrad, 1956, 33-36

Abstract : In three dogs a delayed (by 2 to 3 minutes) reflex was produced to a tone to which was added (for the first 10 seconds of its duration) a weak light stimulus (a 25 watt bulb). In animals of both strong and weak types the reflex was easily produced; increased secretion was

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Abs Jour : Ref Zhur - Biol., No 2, 1958, 9055

observed at about the moment of reinforcement. A strong stimulus (a 500 watt bulb) disrupted the course of the conditioned reflexes in animals with a weak nervous system, while in animals of a strong type it completely inhibited secretion in the first phase and increased it in the second phase of retardation. Summation of inhibition of an initial component of the first phase leads to different results, depending on the strength of the stimulus and the type of higher nervous activity.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000514510010-

Card 2/2

GAVRILOVA, L.N., LAPINA, I.A.

Duration of the preservation of a residual irritation focus in a chemical (oral) analyzer of a dog [with summary in English]. Zhur.vys.nerv. deiat. 8 no.3:379-383 My-Je '58 (MIRA 11:8)

1. Fiziologicheskiy otdel im. I.P. Pavlova Instituta eksperimental'noy meditsiny ANU SSSR.

(MOUTH, physiology.

duration of residual irritation to chem. stimuli in dogs (Rus))

GAVRILOVA, L.N.

Differentiation of symmetrical spots of the skin of dogs depending on the side of the action of unconditioned stimulation. Zhur. vys. nerv. deiat. 10 no.2:252-257 Mr-Apr '60. (MIRA 14:5)

1. Pavlov Physiology Department, Institute of Experimental Medicine,  
U.S.S.R. Academy of Medical Sciences, Leningrad.  
(SKIN) (REFLEXES)

~~GAVRILOVA, L.N.~~

Effect of a unilateral latent focus of excitation on the course  
of unconditioned and conditioned food reflexes. Zhur.vys.nerv.deiat.  
10 no.6:869-873 N-D '60. (MIRA 14:1)

1. Fiziologicheskiy otdel im I.P.Pavlova Instituta eksperimental'noy  
meditsiny Akademii meditsinskikh nauk SSSR.  
(REFLEXES) (CONDITIONED RESPONSE)

GAVRILOVA, L.N.; OBUKHOVA, G.P.

Effect of aminazine on the reflex activities in dogs with unilateral extirpation of the optic thalamus. Zhur. vys. nerv. deiat. 12 no.2: 285-289 Mr. Ap '62. (MIRA 17:12)

1. Fiziologichesk'y otдел imeni I.P. Pavlova Instituta eksperimental'noy meditsiny, Leningrad.

GAVRILOVA, L.N.

Conditioned reflexes from the cutaneous analyzer following  
unilateral excision of the thalamus. Zhur. vys. nerv. deiat.  
12 no.4:649-656 J1-Ag '62.

(MIRA 17:11)

1. Pavlov Physiology Department, Institute of Experimental  
Medicine, U.S.S.R. Academy of Medical Sciences, Leningrad.

GAVRILOVA, L.N.

Conditioned inhibition in dogs with a unilaterally removed  
thalamus. Zhur. vys. nerv. deiat. 13 no. 1:1049-1046 N-D '63.  
(MIRA 17:7)

1. Fiziologicheskiy o'del imeni Pavlova Instituta eksperimental'noy  
meditsiny AN SSSR.

GAVRILOVA, I. P.

USSR / Microbiology. General Microbiology. Physiol- F-1  
ogy and Biochemistry.

Abs Jour: Ref Zhur-Biol., No 16, 1958, 71901.

Author : Belozerskiy, A. N.; Zaytseva, G. N., Gavrilova,  
L. P., Mineyeva, L. V.

Inst : Not given.

Title : Chemistry of Azotobacter. I. Nitrogenous Sub-  
stances of Azotobacter.

Orig Pub: Mikrobiologiya, 1957, 26, No 4, 409-417.

Abstract: The quantity of protein compounds in an Azoto-  
bacter cell (A. agile, A. vinelandii, A. chroo-  
coccum were investigated) changes during the  
development cycle from maximal in the latent  
phase to minimal at the end of the log phase;  
it did not depend essentially on the source of  
the nitrogen. The RNA quantity, being minimal

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*Biol - Soil Faculty - Moscow State Univ*

Card 2/2

GAVRILOVA, L. P.,

A. S. Spirin and L. P. Gavrilova

"The results of investigations of ribonucleic acid of the tobacco mosaic virus"

report presented at the 10th All-Union Conf. on Highly Molecular Compounds,  
Biologically Active Polymer Compounds, Moscow, 11-13 June 1958. (Vest. Ak  
Nauk SSSR, 1958, No. 9, pp. 111-113)

GAVRILOVA, L.P.; SPERIN, A.S.

Infective ribonucleic acid of the tobacco mosaic virus and its behavior during the loss of infectivity. Biokhimiia 24 no.3: 503-513 My-Je '59. (MIRA 12:9)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R., and the Faculty of Biology and Soil Science, the State University, Moscow.

(VIRUSES, metab.

tobacco mosaic virus, ribonucleic acid, role in virulence (Rus))

(RIBONUCLEIC ACID, metab.

tobacco mosaic virus, role in virulence (Rus))

SPIRIN, A.S.; GAVRILOVA, L.P.; BELOZERSKIY, A.N.

Nature and methods of quantitative estimation of the "hyper-chromic effect" of nucleic acids. Biokhimiia 24 no.4:600-611  
Jl-Ag '59. (MIRA 12:11)

1. Institut biokhimii im. A.N.Bakha Akademii nayk SSSR i  
biologo-pochvennyy fakul'tet Gosudarstvennogo universiteta  
im. M.V.Lomonosova, Moskva.  
(NUCLEIC ACIDS chem.)

SPIRIN, A.S.; GAVRILOVA, L.P.; BRESLER, S.Ye.; MOSEVITSKIY, M.I.

Studying the macromolecular structure on infectious ribonucleic acid from tobacco mosaic virus. Biokhimiia 24 no.5:938-947 S-O '59.

(MIRA 13:2)

1. Institut biokhimii im. A.N. Bakha Akademii nauk SSSR, Moskva, 1  
Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR, Lenin-grad.

(VIRUSES chem.)

(RIBONUCLEIC ACID metab.)

17(3)

AUTHORS:

SOV/20-124-4-59/67  
Gavrilova, L. P., Spirin, A. S., Belozerskiy, A. N., Corresponding  
Member AS USSR

TITLE:

Spectrophotometric Study of the Effects of pH and Ion Strength on  
the Stability of High Polymer Ribonucleic Acid in Solution  
(Spektrofotometricheskoye izucheniye vliyaniya pH i ionnoy sily na  
stabil'nost' vysokopolimernoy ribonukleinovoy kisloty v rastvore)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 4, pp 933-956 (USSR)

ABSTRACT:

Ribonucleic Acid (RNA) in vitro is extremely unstable. Even its  
simple preparative production from cell organisms results in a  
higher or lesser degree of degradation (Ref 1). Nor do any of the  
subsequently suggested production methods (Refs 2-7) furnish any  
evidence for the fact that the spontaneous losses in infective power  
occurring in this process (in this particular case the infective  
power of RNA from the tobacco mosaic virus - TMV) or a direct de-  
gradation of the polynucleotide are conditioned by the chemical  
instability of the polymer concerned, subject to certain conditions.  
On the one hand ribonuclease traces may occur in RNA preparations  
and cause the fermentative degradation of RNA in the course of in-  
cubation. On the other hand it is not known whether the spontaneous  
loss in infective power of virus RNA is caused by the one or the

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SOV/20-124-4-59/67

## Spectrophotometric Study of the Effects of pH and Ion Strength on the Stability of Higher Polymer Ribonucleic Acid in Solution

other type of degradation or whether it is governed by entirely different mechanisms. In order to find out whether a progressive spontaneous degradation of polynucleotides takes place in the solutions of high molecular RNA, the authors employed spectrophotometric criteria. After all, the decomposition of the nucleic acids is accompanied by an intensification of their ultraviolet absorption (the "hyperchromic effect", Ref 8). In the case of the instability of the inter-nucleotide bonds of the polynucleotide, the ultraviolet absorption must increase progressively. High molecular RNA and TMV were used as materials. They were obtained by means of several re-precipitations of the leaf juice of mosaic-diseased tomato plants with ammonium sulfate, and by means of threefold preparative ultra-centrifuging. This procedure ensured the high purity of the TMV preparations, including, it seems, also that of ribonuclease admixtures. The RNA obtained therefrom possessed biological activity and infective power (about 1 % of a virus quantity of equal weight), immediately after production. It did not contain any virus particles. It thus constituted a native RNA preparation. For experiments with long incubation periods, buffer solutions with ion strengths ( $\mu$ ) of 0.01 to about 1 and different

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Spectrophotometric Study of the Effects of pH and Ion Strength on the Stability  
of Higher Polymer Ribonucleic Acid in Solution

SOV/20-124-4-59/67

pH were used. The RNA content of the solution was about 20-25  $\mu\text{g}/\text{ml}$ . Incubation takes place in a thermostat at 37° (with chloroform as an antiseptic). Table 1 shows the results: (1) The higher the ion strength of the buffer, the lower is the absorption of the RNA solution. This phenomenon was fully reversible and was by no means linked to the decomposition or denaturation of RNA. Infective power and high molecular weight remained unchanged. (2) Between pH 5.4 and 7.4 no absorption changes take place after 20 days of incubation, this phenomenon being independent of the ion strength of the solvent. Thus the ribopolynucleotide is stable over this pH range. The loss in infective power is not accompanied by any noticeable changes in ultraviolet absorption. (3) On an incubation between pH 5.0 and 8.5 a certain tendency towards an absorption increase emerges. This RNA instability is marked only in solutions of high ion strength ( $\mu\sim 1$ ). With pH 9.0, and even more so with pH 9.5, RNA is progressively decomposed at any ion strength. It can be concluded from the experiments that the spontaneous loss in infective power, on the 2nd-4th days of incubation, does not in any way affect the absorption value of RNA. Probably this process is not a consequence of the instability of the inter-nucleotide bonds. There are 1 table and 11 references.

Card 3/4

Spectrophotometric Study of the Effects of pH and Ion Strength on the Stability  
of Higher Polymer Ribonucleic Acid in Solution

SOV/20-124-4-59/67

ASSOCIATION: Institut biokhimii im. A. N. Bakha Akademii nauk SSSR  
(Institute of Biochemistry imeni A. N. Bakh of the Academy of  
Sciences, USSR) Moskovskiy gosudarstvennyy universitet imeni  
M.V. Lomonosov (Moscow State University imeni  
M.V. Lomonosov)

SUBMITTED: October 25, 1958

Card 4/4

17(3)

AUTHORS:

Spirin, A. S., Gavrilova, L. P., SOV/20-125-3-55/63  
Belozerskiy, A. N., Corresponding Member, AS USSR

TITLE:

On the Problem of the Macromolecular Structure of Native  
High-polymeric Ribonucleic Acid in Solution (K voprosu o  
makromolekulyarnoy strukture nativnoy vysokopolimernoy  
ribonukleinovoy kisloty v rastvore)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 3, pp 658-661  
(USSR)

ABSTRACT:

There are but very few data in publications concerning the  
problem mentioned in the title, despite considerable achieve-  
ments in the study of desoxy ribonucleic acid (DNA). This is  
explained by the exceptional difficulty confronting the  
production of the acid mentioned in the title (RNA). At an  
earlier time, the authors reproduced (Ref 3) the experiments  
made by other scientists (Refs 1, 2) and in the present paper  
they describe the further progress made in the field under  
discussion (Refs 4-11). Figure 1 illustrates data on the  
comparative spectrophotometric titration of the native  
(infectious) RNA and of a denaturated DNA of the tobacco

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On the Problem of the Macromolecular Structure of  
Native High-polymeric Ribonucleic Acid in Solution

SOV/20-125-3-55/63

mosaic virus. The intensification value of the absorption of ultraviolet rays by nucleic acids serves as a direct measure of the number of burst hydrogen bonds (Refs 7, 9, 10). It may be seen from figure 1 that in the case of the native DNA no important variations of the said values occur in the entire pH range from 7 to 3. Only at  $\text{pH} < 3$  an unusually rapid jump of the absorption value of the native DNA takes place. This is explained by the fact that the macromolecule of the native DNA is built according to the type of the 2 rigidly and orderly coupled chains. These chains are kept together by means of specific hydrogen bonds, in which all  $\text{NH}_2$  groups of adenine and cytosine residues in position 6 of the ring (Ref 12) participate. Only the guanine- $\text{NH}_2$ -group in position 2 can remain more or less free. It has the least  $\text{pK}_a$  value ( $= 2.75$ ) (Refs 9, 10). From the results obtained it follows that the spectrophotometric behavior of the native RNA does not show any similarity with that of the native DNA. On the contrary, the behavior of the former is in every way similar to that of denaturated DNA. This is indicative of the fact that there is no orderly and specific secondary structure (structure of

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On the Problem of the Macromolecular Structure of  
Native High-polymeric Ribonucleic Acid in Solution

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hydrogen bonds) in the native RNA. Spectrophotometric data lead to the conclusion that the macromolecule of native RNA is not built according to the type of a rigid 2-chain structure of native DNA, but is most likely to be a simple polynucleotide chain, which conglomerates to an irregular ball in the solution. Such a ball is subject to all rules of the flexible poly-electrolyte and is changed under the action of various circumstances without losing its infection power. There are 2 figures, 1 table, and 15 references, 2 of which are Soviet.

ASSOCIATION: Institut biokhimii im. A. N. Bakha Akademii nauk SSSR (Institute of Biochemistry imeni A. N. Bakh of the Academy of Sciences, USSR)  
Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: January 9, 1959

Card 3/3

17(3)

AUTHORS:

Gavrilova, L. P., Spirin, A. S., Belozerskiy, A. N., Corresponding Member, AS USSR

SOV/20-126-5-59/69

TITLE:

The Effect of Temperature on the State of Macromolecules of Viral Ribonucleic Acid in Solution (Deystviye temperatury na sostoyaniye makromolekul virusnoy ribonukleinovoy kisloty v rastvore)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 5, pp 1121-1124 (USSR)

ABSTRACT:

The authors have not succeeded in a former paper (Ref 1) to prove any clear correlation of the process of the spontaneous loss of the infectious power with the alteration of the physicochemical indices: the ultraviolet absorption, the viscosity and the sedimentation. But further studies could show new characteristics in the behavior of the macromolecules of the infectious ribonucleic acid (RNA). In this article data about the viscosity and sedimentation are given. The production of the infectious (RNA) and the control of its infectious power was carried out as in reference 1. In figure 1 the character of the temperature dependence of this RNA in phos-

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The Effect of Temperature on the State of Macromolecules of Viral Ribonucleic Acid in Solution

SOV/20-126-5-59/69

phate buffer can be seen. As curve 1 shows, no essential alteration of the viscosity takes place at a temperature increasing between 20 and 50°. At further heating a rapid increase of viscosity results, the maximum being at 60-70°. Therefore in this fixed and rather narrow temperature range a transformation of the RNA-molecules ensues from one state into another. Thereat the molecules are not inactivated at once (that is they don't lose their infectious power). This transformation is reversible. Out of curve 2 it can be seen that RNA preparations which have lost their infectious power show none of the above mentioned temperature effects. It has proved that the amount of the viscosity increasing on heating is proportional to the infectious activity of the RNA-preparations. Out of figure 2 it can be seen that the temperature effect is even greater in 6 M urea buffered with phosphate and that it takes place at a deeper temperature (40-50°). At 50° the viscosity is quadrupled and remains now as before reversible. It remains also a function of the infectious activity (Fig 2: 2-4). At a complete loss of the infectiousity also the tem-

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The Effect of Temperature on the State of Macromolecules of Viral Ribonucleic Acid in Solution

SOV/20-126-5-59/69

perature effect is missing (Fig 2: 5). To find out the reasons of this phenomenon sedimentation experiments at different temperatures were made. Out of table 1 follows that the tripling of the specific viscosity is accompanied by a decrease of the sedimentation constant to  $1/3$ . This makes it credible that the temperature effect is combined with a rapid increasing of the particle asymmetry of the RNA. Apparently the RNA-polynucleotide-chain is levelled existing at deep temperatures as skein of this or that shape (Refs 3-5). The decrease in the temperature of the said effect by urea lets suppose a considerable importance of the separation process of the hydrogen bonds on reaching the above effect. On comparing the infectious and noninfectious RNA-part a much smaller viscosity can be noticed at the latter than at the first but the sedimentation constants are near together in both cases. It is also imaginable that the infectious RNA-molecules exist at  $50^{\circ}$  in urea as more or less levelled unbroken 1-chains whilst the no more infectious RNA are represented by much shorter chains. But since (Ref 1) no clear difference can be noticed between the particle size

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30V/20-126-5-59/69  
The Effect of Temperature on the State of Macromolecules of Viral Ribonucleic Acid in Solution

of both RNA-forms the authors suppose that the unbroken 1-chain structure of the native RNA is changed into a broken one in the course of the loss of the infectious power (incubation at room temperature or at  $37^{\circ}$ ). Out of all this it may be seen, that the amount of the temperature effect is a clear physicochemical criterion of the infectious power of the viral-RNA-preparations. There are 3 figures, 1 table, and 8 references, 7 of which are Soviet.

ASSOCIATION: Institut biokhimii im. A. N. Bakha Akademii nauk SSSR (Institute of Biochemistry imeni A. N. Bakh of the Academy of Sciences, USSR) Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: April 3, 1959

Card 4/4

GAVRILOVA, L. P., Cand Biol Sci -- (diss) "Study of the macromolecular structure of infectious ribonucleic acid of the tobacco mosaic virus and its changes upon spontaneous inactivation." Moscow, 1960. 25 pp; with graphs; (Moscow State Univ im M. V. Lomonosov, Biology-Soil Science Faculty, Academy of Sciences USSR, Inst of Biochemistry im A. N. Bakh); 130 copies; price not given; (KL, 18-60, 149)

KISELEV, N.A.; GAVRILOVA, L.P.; SPIRIN, A.S.

Macromolecular configurations of high-polymeric ribonucleic acid  
according to the data of electron microscopy. Dokl.AN SSSR 138  
no.3:692-694 My '61. (MIRA 14:5)

1. Institut biologicheskoy i meditsinskoy khimii AMN SSSR.  
Predstavleno akademikom A.I.Oparinym.  
(NUCLEIC ACIDS) (MACROMOLECULAR COMPOUNDS)

SPIRIN, A.S.; GAVRILOVA, L.P.

Macromolecular structure of native ribonucleic acid solution.  
Izv. AN SSSR. Ser. biol. no.4:504-518 J1-Ag '61. (MIRA 14:9)

1. Institut biokhimi im. A.N.Bakha AN SSSR.  
(NUCLEIC ACIDS)

27 000

39229

S/218/62/027/003/001/005

1018/1218

AUTHOR: Bogdanova, Ye. S., Gavrilova, L. P., Dvorkin, G. A., Kiselev, N. A. and Spirin, A. S.

TITLE: Macromolecular structure of high-polymer (ribosomal) ribonucleic acid

PERIODICAL: Biokhimiya, v. 27, no. 3. 1962, 387-402

TEXT: RNA of E. coli was studied by means of sedimentation, viscosity, UV absorption, optical rotation, UV electric dichroism measurements and electron microscopy. In its physical and physico-chemical properties it resembles closely the native TMV RNA studied earlier. The macrostructural organization of high-polymer TMV RNA resembles that of E. coli ribosomal RNA. Each macromolecule constitutes one continuous polynucleotide chain. The configuration in solution is governed by the free equilibrium resulting from the reversible interaction of intramolecular forces (hydrogen bonds, electrostatic repulsion and probably coordinate links involving metals). At room temperature and at a sufficient ionic strength, short mainly adjacent sections of the single-stranded polynucleotide chain interact with each other in pairs by means of hydrogen bonds forming short double-stranded DNA-like helical regions stabilized by hydrogen bonds (secondary structure). As a whole, RNA macromolecules can be found in different configurations, depending on ionic strength, temperature and: a) an unfolded strand without any secondary structure; b) a compact rod formed by linear piling of numerous short helical regions orderly oriented and alternating with

Card 1/2

Macromolecular structure of...

S/218/62/027/003/001/005  
1018/1218

random chain regions, c) a compact coil made up from the non-oriented helical and random regions. All these configurations are interrelated with each other by free reversible transitions. There are 9 figures and 35 references.

ASSOCIATION: Institut biokhimii im. A. N. Bakha, Institut biofiziki i Institut kristallografi Akademii nauk SSSR, Moscow (Institute of Biochemistry im. A. N. Bakh, Institute of Biophysics and Institute of Crystallography, Academy of Sciences USSR)

SUBMITTED: December 5, 1961

Card 2/2

BELITSINA, N.V.; GAVRILOVA, L.P.; AYTKHOZHIN, M.A.; NEYFAKH, A.A.;  
SPIRIN, A.S.

Informational ribonucleic acid at early stages of the development  
of the embryos of the loach (*Misgurnus fossilis*). Dokl. AN SSSR 153  
no.2:464-467 N '63. (MIRA 16:12)

1. Institut biokhimii im. A.N.Bakha AN SSSR i Institut morfologii  
zhivotnykh im. A.N.Severtsova AN SSSR. Predstavleno akademikom  
A.N.Belozerskim.

BELTSINA, N.V.; GAVRILOVA, L.P.; NEYFAKH, A.A.; SPIRIN, A.S.

Effect of radiation inactivation of nuclei on the synthesis of informational ribonucleic acid in embryos of the pond loach (*Misgurnus fossilis*). Dokl. AN SSSR 153 no.5:1204-1206 D '63. (MIRA 17:1)

1. Institut biokhimii im. A.N. Bakha i Institut morfologii zhivotnykh im. A.N. Svertseva AN SSSR. Predstavleno akademikom A.N. Belozerskim.

GAVRILOVA, L. V.

"Comparative Characteristics of Cold-Resisting Winter Wheat of the Kirov Oblast." Cand Biol Sci, Moscow State Pedagogical Inst imeni V. I. Lenin, 1 Mar 54. Dissertation (Vechernyaya Moskva Moscow, 17 Feb 54)

SO: SUM 186 19 Aug 1954

Gavrilova, L. V.

Frost resistance of winter wheat and the enzyme quality.  
A. V. Il'gousshechenik and L. V. Gavrilova. Doklady  
Akad. Nauk S.S.S.R. 95, 607-8 (1974).—Exam. of the  
activity and thermal coeff. of activity of catalase and sac-  
charase in frost-resistant and nonfrost-resistant forms of  
wheat showed a decidedly greater quality in the frost-  
resistant specimens, i.e. a smaller temp. coeff. G. M. K.

ANDREYEVA, V.S.; GAVRILOVA, L.V.; LEVIN, V.M.; RESHETNIKOVA, Zh.V.

Acute psychotic states during antabuse treatment of chronic alcoholism.  
Zhur.nev. i psikh. 59 no.6:674-678 '59. (MIRA 13:1)

1. Bol'nitsa imeni Gannushkina (glavnyy vrach V.N. Rybalka) i kafedra  
psikhiatrii (zav. - prof. A.V. Snezhnevskiy) Tsentral'nogo instituta  
usovershenstvovaniya vrachev, Moskva.

(DISULFIRAM, inj. eff.

psychoses (Rus))

(PSYCHOSES, etiol. & pathogne.

disulfiram (Rus))

GAVRILOVA, L.V., kand.biologicheskikh nauk; SHABALINA, L.P., studentka

Influence of growth stimulants on the tomato crop. Biol. v shkole  
no. 1:47-49 Ja-F '61. (MIRA 14:4)

1. Kirovskiy pedagogicheskiy institut.  
(Tomatoes) (Growth promoting substances)

GAVRILOVA, L.V.

Effect of succinic and fumaric acids on the growth, development,  
and yield of radishes and cucumbers. Biul. Glav. bot. sada  
no.45:98-101 '62. (MIRA 16:2)

1. Gosudarstvennyy pedagogicheskiy institut imeni  
V.I. Lenina, Kirov.

(Plants, Effect of fumaric acid on)  
(Vegetables)

(Plants, Effect of succinic acid on)

GAVRILOVA, L.S.

Biogenic stimulants and the productivity of sugar beets. Biul.  
Glov. bot. sada no.57:98-100 '65. (MIRA 18:9)

1. Kirovskiy pedagogicheskiy institut, Kirov.

POPOVA, Irina Konstantinovna; GAVRILOVA, M.

[In the interests of collective farms and the state] V interesakh kolkhozov i gosudarstva. Moskva, Mosk.rabochii, 1959.  
62 p. (MIRA 13:3)

(Agriculture--Economic aspects)

GAVTIMAZH. 11.

... .. in greater quantities. West.  
... .. no. 67 Jo '61. (MEM: 14:7)

Zamstitel' nachal'nika otдела Upravleniya tekstil'noy i

(Moscow - Leather goods)

GAVRILOVA, M.A., doktor tekhn.nauk; ARTOBOLVSKIY, S.I., doktor tekhn. nauk; BERSHTEYN, S.I., kand. tekhn. nauk; BOLGAKOV, A.A., kand. tekhn. nauk; LERNER, A.Ya., doktor tekhn. nauk; MEYEROV, M.V., doktor tekhn. nauk; SUKHOV, N.K., doktor tekhn. nauk; FEL'DBAUM, A.A., doktor tekhn. nauk; FILIPPOVICH, B.I., doktor tekhn. nauk; KHAMOV, A.V., doktor tekhn. nauk; SHORYGIN, A.B., doktor tekhn. nauk

[Terminology on the basic concepts of automatic control] Terminologiya osnovnykh poniatii avtomatiki; doklad. Moskva, 1960. 31 p. (International Federation of Automatic Control, 8th International Congress, Moscow, 1960. Doklady, no.232) (MIRA 14:8)

1. Natsional'nyy komitet po avtomaticheskomu upravleniyu. Nauchno-tekhnicheskii komitet terminologii. 2. Nauchno-tekhnicheskii komitet terminologii Natsional'nogo komiteta SSSR po avtomaticheskomu upravleniyu (for all).

(Automatic control—Terminology)

S/194/62/000/007/103/160  
D271/D308

9.1.1970  
AUTHORS: Il'in, V.S., and Gavrilova, M.F.

TITLE: Calculation of an abrupt non-uniformity of general form in the H-plane of rectangular waveguide

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1962, abstract 7zh170 (Uch. zap. Saratovsk, un-t, 1960, v. 69, 263 - 269)

TEXT: Equivalent conductance is calculated for a non-uniformity arising at the coupling point of rectangular waveguides. An inductive diaphragm in the form of a sheet grating is placed in the plane of the waveguide joint. The coupled waveguides are filled with ideal isotropic media. Variational method is used in the calculation of equivalent conductance of the non-uniformity. [Abstractor's note: Complete translation.] VB

Card 1/1

GAVRILOVA, M. K.

"Radiational Balance of the Yakutsk Region".

Vest. Mosk. un-ta, No 6, pp 135-142, 1954.

Computed data of the monthly and yearly magnitudes of radiational balance and its components for Yakutsk, Olekminsk, and Vilnus is given, together with data on the heat balance and on the quantity "dryness index," according to Budyko, for Yakutsk. (RZhGeol, No 8, 1955)

SO: Sum No 884, 9 Apr 1956

Kafedra klimatologii.

GAVRILOVA, M.K.

36-68-17/18

AUTHOR: Gavrilova, M. K.

TITLE: Summary Radiation in Alaska (Summarnaya radiatsiya v Alyaske)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii  
1957, Nr 68, pp. 195-203 (USSR)

ABSTRACT: The article discusses radiation factors and summary radiation in Alaska, and presents the results of observations recorded by 5 Alaskan observatories. It is based primarily on English and American sources. There are 4 figures, 2 tables and 10 references, of which 2 are USSR.

AVAILABLE: Library of Congress

Card 1/1

GAVRILOVA, M. K.

PHASE I BOOK EXPLOITATION

SOV/4027  
SOV/2-M-92

p 2  
Leningrad. Glavnaya geofizicheskaya observatoriya

Teplovoy balans zemnoy poverkhnosti (Heat Balance of the Earth's Surface)  
Leningrad, Gidrometeoizdat, 1959. 134 p. (Series: Its: Trudy, vyp. 92)  
Errata slip inserted. 1,100 copies printed.

Sponsoring Agency: USSR. Sovet Ministrov. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed. (Title page): M.I. Budyko, Doctor of Physics and Mathematics; Ed. (Inside book): T.V. Ushakova; Tech. Ed.: N.V. Volkov.

PURPOSE: This publication is intended for meteorologists, hydrologists, and geophysicists.

COVERAGE: This collection of articles presents climatological analyses of the heat and water balance of the earth's surface. An article on the radiation regime of the Arctic contains original maps showing the absorption of radiation

Card 1/3

Heat Balance of the Earth's Surface

SOV/4027

and the radiation balance in kcal/cm<sup>2</sup> per month and per year. The article on the heat balance of the North Atlantic area contains maps showing total radiation, radiation balance, expenditure of heat on evaporation, and turbulent heat exchange in kcal/cm<sup>2</sup> per month and per year. An article by Ying Tsung-chao discusses the results of a detailed study of the heat and water balance in China. The heat and moisture exchange conditions between the earth's surface and the atmosphere in the southern part of European USSR and the Arctic are discussed in a final article. References accompany each article.

TABLE OF CONTENTS:

Gavrilova, M.K. Radiation Balance of the Arctic	3
Strokina, L.A. Heat Balance of the North Atlantic	27
Ying, Tsung-chao. Characteristics of the Heat and Water Balances in China	50
Bakalov, S.A., B.A. Deryugin, and K.A. Sychev. Radiation and Heat Balance of the Arctic Land Surface Card 2/3	102

Heat Balance of the Earth's Surface

SOV/4027

Sinitssyna, N.I. Dynamics of Productive Soil Moisture in the Southern Part  
of European USSR

127

AVAILABLE: Library of Congress

Card 3/3

JA/dm/gwp  
7-26-60

GAVRILOVA, M.K.

Radiation balance of the Arctic. Trudy GGO no.92:3-26  
'59. (MIRA 13:5)  
(Arctic regions--Solar radiation)

GAVRILOVA, M.K.

Total amount of radiation as recorded at Soviet and foreign stations  
in the Arctic. Trudy ANII 217:139-156 '59. (MIRA 13:2)  
(Arctic regions--Solar radiation)

САВЕЛИЦКАЯ, Л.Е. Съвд Chem Sci (russ) "Radiation climate of the Arctic".

Leningrad, 1960, 14 pp (Leningrad Hydrometeorological Institute) (KL, 13-60, 143)

S/169/62/000/001/044/083  
D228/D302

AUTHOR: Gavrilova, M. K.

TITLE: Heat balance for the "Suntar-Khayata" alpine station

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1962, 21, abstract 1B152 (V sb. Issled. lednikov i lednik. r-nov., no. I, M., AN SSSR, 1961, 154-162)

TEXT: Observations were made at a height of 2068 m above sea-level. The maximum values of direct solar radiation upon a perpendicular surface at the "Suntar-Khayata" station reach 1.50 large calories/cm<sup>2</sup>/min, which is due to the high atmospheric transparency, whereas the yearly total of direct solar radiation is close in its value to the magnitude observed at Oymyakon, situated in a hollow. Scattered radiation comprises about 55% of the summary radiation. In consequence of the snow-cover's prolonged occurrence 65% of the solar energy entering during the year is reflected to the atmosphere. As a result of the great loss of radial energy the magnitude of the radiation balance is four times smaller than at lowland sta-

Card 1/2

Heat balance for ...

S/169/62/000/001/044/083  
D228/D302

tions. On the whole the outlay of heat in the warm period of the year proceeds through evaporation. [Abstractor's note: Complete translation.]

Card 2/2

GAVRILOVA, Mariya Kuz'minichna; GRAVE, N.A., doktor geograf.nauk,  
otv. red.; YEFIMOV, F.P., red.izd-va; PARNIKOV, Ye.S., tekhn.  
red.

[Climate of central Yakutia] Klimat Tsentral'noi Iakutii. Iakutsk,  
Iakutskoe knizhnoe izd-vo, 1962. 62 p. (MIRA 16:6)  
(Yakutia—Climate)

GAVRILOVA M.K.

PHASE I BOOK EXPLOITATION

SOV/6481

Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut merzlotovedeniya.

Teplo- i massoobmen v merzlykh tolshchakh zemnoy kory (Heat and Mass Transfer in the Frozen Strata of the Earth's Crust) Moscow, Izd-vo AN SSSR, 1963. 213 p. Errata slip inserted. 1200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Sibirskoye otdeleniye Institut merzlotovedeniya.

Resp. Ed.: N.I. Saltykov, Professor, Doctor of Technical Sciences;  
Ed.: A.L. Bankvitser; Tech. Ed.: V.G. Laut.

PURPOSE: This book is intended for research workers in permafrost and geocryology.

COVERAGE: This collection of papers deals with the results of theoretical, laboratory, and field research on heat transfer in frozen

Card 1/7

Heat and Mass Transfer (Cont.)

SOV/6481

ground and in ice carried out by the staff of the Heat- and Mass-Transfer Division of the Institute of Permafrost Study, Siberian Branch, AN SSSR. The theory of heat- and mass-transfer in ice, frozen and thawed ground, and rocks is discussed. The problem of heat transfer between engineering structures and frozen ground is investigated. Methods used in these investigations and the instrumentation and equipment designed by the authors are described.

TABLE OF CONTENTS:

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Ivanov, N.S. The Heat Regime of the Upper Layer of the Earth's Crust in the Yakutsk Area	9
Gavrilova, M.K. The Heat Regime of Surface and Near-Surface Rocks According to Calculations and Observations Made at the Suntar-Khayat High-Altitude Mountain Station in 1959	56

Card 2/7

~~GAVRILOVA, Mariya Kuz'minichna;~~ BUDYKO, M.I., doktor fiz.-  
mat. nauk, red.; RUSAKOVA, G.Ya., red.; BRAYNINA,  
M.I., tekhn. red.

[Radiation climate of the Arctic] Radiatsionnyi klimat  
Arktiki. Pod red. M.I.Budyko. Leningrad, Gidrometeoizdat,  
1963. 225 p. (MIRA 16:11)

(Arctic regions--Climate)  
(Arctic regions--Radiation)

GRAVE, N.A., doktor geogr.nauk; GAVRILOVA, M.K.; GRAVIS, G.F.;  
KATASONOV, Ye.M.; KLYUKIN, N.K.; KOREYSHA, M.M.;  
KORNILOV, B.A.; CHISTOTINOV, L.V.; TORKHANOVA, Z.A., red.

[Collection of articles] Sbornik statei. Moskva, Nauka,  
No.14. 1964. 140 p. (MIRA 17:12)

1. Akademiya nauk SSSR. Mezhdudomstvennyy komitet po  
provedeniyu Mezhdunarodnogo geofizicheskogo goda. IX razdel  
programmy MGG. Glyatsiologiya.

ACC NR: AR6035260

SOURCE CODE: UR/0169/66/000/009/B011/B011

AUTHOR: Gavrilova, M. K.

TITLE: Influx of solar radiation heat in Yakutiya based on actual observations

SOURCE: Ref. zh. Geofizika, Abs. 9B78

REF SOURCE: Uch. zap. Yakutskogo un-ta, vyp. 16, 1965, 13-46

TOPIC TAGS: radiation, solar radiation scattering, solar radiation, solar heat radiation, solar corpuscular radiation/Yakutiya

ABSTRACT: An analysis is made of data obtained on radiation regimes during the period 1958—1963. The intensity of direct solar radiation at midday during the year was found to increase from winter to summer, reaching on the average  $1.30-1.35 \text{ cal/cm}^2 \text{ min}$ . Monthly totals of direct solar radiation incident to a perpendicular surface vary on the average as follows: in arctic regions, from zero during the polar night to  $10-12 \text{ kcal/cm}^2 \text{ month}$  during the polar day (annual total  $\sim 55 \text{ kcal/cm}^2$ ); in the middle latitudes, from  $0.5 \text{ kcal/cm}^2 \text{ month}$  in December to  $18 \text{ kcal/cm}^2 \text{ month}$  in June (annual total  $\sim 110-115 \text{ kcal/cm}^2 \text{ month}$ ). The least influx of radiation during the winter months is  $0.2-0.5 \text{ kcal/cm}^2 \text{ month}$ .

Cord 1/2

UDC: 551.521.31

ACC NR: AR6035260

in the southern regions to zero in the north. The greatest influx of radiative heat is during the summer months: from 9—10 kcal/cm<sup>2</sup> month in the southern regions to 5—6 kcal/cm<sup>2</sup> month in the Arctic. On the whole during the year the influx of direct solar radiative heat incident to a horizontal surface is 45—50 kcal/cm<sup>2</sup> in the south to 25—30 kcal/cm<sup>2</sup> in the extreme north. Variations in the influx of dispersed radiation as a function of latitude during the warm period are not pronounced. In the presence of a snow cover radiative scattering is 10—15% greater than in its absence. During a year the influx of scattered radiative heat in Yakutiya is ~ 40—45 kcal/cm<sup>2</sup>. The yearly range in summary winter radiation is from 1 kcal/cm<sup>2</sup> in the south to zero beyond the Arctic circle. During the summer months the average summary heat radiation in Yakutiya is between 14—16 kcal/cm<sup>2</sup> month. The summary annual influx of radiation, on the whole, decreases with latitude from 94 kcal/cm<sup>2</sup> in the southern regions to 73—80 kcal/cm<sup>2</sup> in the north. N. Rudometkina. [Translation of abstract] [SP]

SUB CODE: 04/

Card 2/2

GAVRILOVA, N.A.; GRILIKHES, S.Ya., kand. tekhn. nauk, red.

[Preparing metal surfaces for electroplating;—a  
bibliographic index] Podgotovka poverkhnosti metallov  
pod gal'vanicheskie pokrytiia; bibliograficheskii uka-  
zatel'. Leningrad, Leningr. dom nauchno-tekhn. propagandy,  
1962. 36 p. (MIRA 16:10)  
(Bibliography--Electroplating)

GAVRILOVA, N.A.

Electroencephalographic studies in sleep disorders in reactive conditions. Zhur. nevr. i psikh. 54 no.11:915-918 N '54.

(MLRA 8:1)

1. Nauchno-issledovatel'skiy institut psikhiiatrii Ministerstva zdoravookhraneniya SSSR.

(NEUROSES, REACTIVE, complications,  
sleep disord., EEG)

(SLEEP DISORDERS, etiology and pathogenesis,  
neuroses, reactive, EEG)

(ELECTROENCEPHALOGRAPHY, in various diseases,  
sleep disord. in reactive neuroses)

GAVRILOVA, N. A.

✓ The use of glutamic acid in the psychiatric clinic. V. B. Galenko, N. A. Gavrilova, B. Ya. Skuin, and O. A. Shishova. *Zhur. Nevropatich. i Psikiatrii im. Korsakova* 55, 841-8 (1965).--A favorable effect of glutamic acid (I) administration to patients having symptoms of astheno-depression and of hypochondria of schizophrenic and somatic character was observed, but was more pronounced when I was used as a supplement to vitamin therapy, or to therapeutic doses of insulin, or to heparin transfusions. When I was used as a supplement to pharmacologic sleep, the sleep was considerably deeper and the usual toxic effects were markedly reduced. Where therapeutic effect of I was considerable, there was an evident improvement in the indices of N and P metabolism: a lowering in the blood NH<sub>4</sub>OH and amino-N, an increase in the protein-lipide and acid-sol. P ratio and a lowering in the inorg. P and P-esters of the blood.

B. S. Lening

Inst Psychiatry, Min Health USSR

CAVRILOVA, N.A.; KORKINA, M.V.

Characteristics of biological currents of the brain in Korsakoff's syndrome of varying etiology [with summary in French]. Zhur.nevr. i psikh. 57 no.3:370-375 '57. (MLRA 10:6)

1. Kafedra psikhatrii (sav. - prof. O.V.Kerbikov) II Moskovskogo meditsinskogo instituta imeni I.V.Stalina.

(PSYCHOSES

Korsakoff's synd. of various etiol., EEG (Rus))

GAVRILOVA, N. A., Cand Med Sci -- (diss) "Electroencephalographic study of the interrelation of visual and auditory analy<sup>z</sup>ors in certain psychic diseases." Mos, 1958. 19 pp (Inst of Higher Nervous Activity, Acad Sci USSR, Sci Res Inst of Psychiatry, Min of Health USSR), 120 copies (KL, 18-58, 102)

Country : USSR  
Category: Pharmacology. Toxicology. Anti-Infection Agents.

Abs Jour: RZhBiol., No 6, 1959, No 27836

Author : Samsonov, M.A.; Gavrilova, N.A.

Inst : - \*\*\*

Title : Side Effects in Patients With Infectious Nonspecific Polyarthrititis Treated With Pyrazolidine.

Orig Pub: Sov. meditsina, 1958, No 4, 100-106

Abstract: Pyrazolidine (I) in a dose of 0.15 g 4 times daily induces in a majority of patients (32 of 40) with infectious nonspecific polyarthrititis, along with a positive influence on the basic manifestations of the disease, aside effects on kidneys (presence of albumen, fresh and lixiviated erythrocytes, leucocytes; these manifestations take

\*\*\*Iz Nauchno-issledovatel'skogo instituta fizioterapii (dir. - chlen-Korrespondent AMN SSSR prof. A.N.Obrosof) Ministerstva zdravvokhreneniya RSFSR.

Card : 1/2

V-36

Country : USSR  
Category: Pharmacology. Toxicology. Anti-Infection Agents.

"APPROVED FOR RELEASE: 07/19/2001" CIA-RDP86-00513R000514510010-4"

Abs Jour: RZhBiol., No 6, 1959, No 27836

place after an intake of only 3-4 g. of I), on white and red blood (manifestation of leucopenia, stabnuclear shift, monocytosis, toxic granulation of neutrophils and slight anemia), on the gastrointestinal tract (decrease of appetite, paroxysmal or diffuse pains in epigastric region, frequent liquid stool), on the skin (toxico-allergic rash, which disappear in desensitizing treatment). With decrease of the daily dose of I twice (2 intakes of 0.15 g or 4 intakes of 0.065 g each daily) the side effects stop; however, the changes in the kidneys (hematuria) last longest. Repeated prescription of I even in a dose of 0.3 g daily frequently induces recurrence of hematuria. - From the authors' resume

Card : 2/2

GAVRILOVA, N.A.

Electroencephalographic study of stimulation of the cortical end of  
the human visual and acoustic analysors. Trudy Inst. vys. nerv. deiat.  
Ser. fiziol. 3:82-90 '59. (MIRA 12:3)

1. Iz laboratorii elektrofiziologii uslovykh refleksov, zav. - M.N.  
Livanov.

(ELECTROENCEPHALOGRAPHY) (VISION)  
(HEARING)

GAVRILOVA, N.A.

Electrophysiology of the higher nervous activity in man during the action of complex stimuli and the formation of a conditioned response to them. Trudy Inst. vys. nerv. delat. Ser. fiziol. 3:91-101 '59.

(MIRA 12:3)

1. Iz laboratorii elektrofiziologii uslovnnykh refleksov, zav. -  
M.M. Livanov.

(CONDITIONED RESPONSE) (ELECTROENCEPHALOGRAPHY)

GAVRILOVA, N.A.

Changes in the bioelectric mosaic of the cerebral cortex in man during the formation of conditioned motor reflexes. Zhur. Nevr. i psikh. 59 no.8:954-963 '59. (MIRA 12:12)

1. Institut vysshey nervnoy deyatel'nosti AN SSSR, Moskva.  
(CEREBRAL CORTEx physiol.)  
(REFLEX, CONDITIONED physiol.)

GAVRILOVA, N.A.

Studies on the cortical mosaic in various forms of schizophrenia.  
Zhur. nerv. psikh. 60 no. 4:453-460 '60. (MIRA 14:4)

1. Elektrofiziologicheskaya laboratoriya (zav. - prof. M.N. Livanov)  
Instituta vysshey nervnoy deyatel'nosti AN SSSR, Moskva.  
(SCHIZOPHRENIA) (CEREBRAL CORTEX)

ABRIKOSOV, I.A. [deceased]; GAVRILOVA, I.A.

Action of an ultra-high frequency electric field through bandages with ointments and medicinal solutions. Vop. kur., fizioter. i lech. fiz. kul't. 26 no.4:332-335 J1-Ag '61. (MIRA 15:1)

1. Iz otdela fizicheskikh faktorov (zav. - prof. I.I.Abrikosov [deceased]) Nauchno-issledovatel'skogo instituta fizioterapii Ministerstva zdravookhraneniya RSFSR (dir. - shlen-korrespondent AMN SSSR prof. A.N.Obrosof).

(BANDAGES AND BANDAGING)  
(ELECTRICITY—PHYSIOLOGICAL EFFECT) (OINTMENTS)

SKURIKHINA, L.A.; GAVRILOVA, N.A.

Effect of inductothermy on the temperature of the blood, the bile, gallstone, the liver and metal. Vop.kur., fizioter.i lech.fiz. kul't. 27 no.3:210-215 My-Je '62. (MIRA 15:9)

1. Iz otdela fizicheskikh faktorov (zav. - prof. I.A.Abrikosov [deceased]) Nauchno-issledovatel'skogo instituta fizioterapii Ministerstva zdravookhraneniya RSFSR (dir. - chlen-korrespondent AMN SSSR prof. A.N.Obrosov).  
(DIATHERMY) (BODY FLUIDS) (LIVER)

GAVRILOVA, N.A.

Relation between the variations of the cortical bioelectrical  
mosaic and its original state in the formation of a conditioned  
reflex. Trudy Inst.vys.nerv.deiat. Ser.fiziol. 7:22-32 '62.  
(MIRA 16:2)

(CEREBRAL CORTEX) (CONDITIONED RESPONSE)  
(ELECTROPHYSIOLOGY)

ACCESSION NO: AP4014135

S/0247/64/014/001/0003/0008

AUTHOR: Gavrilova, N. A.; Aslanov, A. S.; Dzugayeva, S. B.; Kaganova, Z. I.

TITLE: Cross-correlations of bioelectrical activity in various cortical areas of the human brain in a state of relative rest

SOURCE: Zhurnal vyssh. nerv. deyatel'., v. 14, no. 1, 1964, 3-8

TOPIC TAGS: bioelectric activity, brain bioelectric activity, human brain, electroencephalogram, brain bioelectric activity distribution

ABSTRACT: The study of the electrical activity of the brain permits an objective evaluation of the functional condition of the cortex, both in a state of rest as well as under functional loads. The peculiarities of spatial correlation of the biopotentials of various cortical regions were therefore studied in healthy subjects in a state of relative rest. Electrical activity was recorded from 50 points of the cortex by means of an electroencephaloscope. The resulting data were processed on an electronic computer. Pair correlation of bioelectrical activity was investigated for all fifty points. Similar direction of changes in the biopotentials from moment to moment for each pair of leads served as a criterion of the similarity of electrical oscillations. It was found that for a

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ACCESSION NR: AP4014135

healthy person in a state of relative rest a high degree of correlation in the biopotentials at the various cortical regions of the brain is weakly expressed. Most characteristic for this state is a relatively low degree of cross-correlation of biopotentials at various cortical regions. Adjacent regions enter into such interconnections and their localization in the cortex is accidental; such "connections" are distributed in a uniform diffuse way over the whole cortex. The direction of "functional correlations" emerging between separate cortical points corresponds to the direction of commissural and associative cortical paths. Orig. art. has: 3 figures.

ASSOCIATION: Institut vysshey nervnoy deyatel'nosti i nevrofizologii akademii nauk SSSR (Institute of Higher Nervous Activity and Neurophysiology, SSSR Academy of Sciences); Institut mozga AMN SSSR (Institute of the Brain, AMN SSSR)

SUBMITTED: 15Apr63

DATE ACQ: 13Mar64

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NO REF SOV: 011

OTHER: 000

Card 2/2

LIVANOV, M.N.; GAVRILOVA, N.A.; ASLANOV, A.S.

Correlations of various parts of the cerebral cortex during intellectual work. Zhur. vys. nerv. deiat. 14 no.2:185-194 Mr-Apr '64.

(MIRA 17:6)

1. Institute of Higher Nervous Activity and Neurophysiology, U.S.S.R. Academy of Sciences, Moscow.

GAVRILOVA, N.A.

New methods of treatment with didynamic currents. Vop. kur., fizioter.  
i lech. fiz. kul't. 29 no.4:364-365 JI-Ag '64. (MIRA 18:9)

1. Otdeleniye fizioterapii polikliniki (glavnyy vrach S.A.Noskov)  
Gosudarstvennogo komiteta Soveta Ministrov SSSR po aviatsionnoy  
tekhnike (GKAT), Moskva.

GAVRILOVA, N.A.

Characteristics of the correlation of biopotentials of various areas of the cerebral cortex in patients with the paranoid form of schizophrenia. Zhur. nevr. i psikh. 65 no.12:1855-1864 '65.

(MIRA 19:1)

1. Laboratoriya elektrofiziologii usloynykh refleksov (zaveduyushchiy - prof. M.N. Livanov) Instituta vysshey nervnoy deyatel'nosti i neyrofiziologii AN SSSR, Moskva. Submitted July 29, 1964.

85881

9.2181(2303,3203)  
24,7800(1144,1162)

S/048/60/024/011/017/036  
B006/B056

AUTHORS: Strukov, B. A. and Gavrilova, N. D.

TITLE: The Problem of Piezo Effects in Variconds

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1960,  
Vol. 24, No. 11, pp. 1369 - 1371

TEXT: The present paper is a reproduction of a lecture delivered on the 3rd Conference on Ferroelectricity, which took place in Moscow from January 25 to 30, 1960. The authors deal with the piezoelectric effect occurring as a result of the application of a constant electric field in variconds (nonlinear dielectric elements). Fig.1 shows the frequency characteristics of the complex conductivity of a BK-2 (VK-2) sample of the size 18.4 x 4.2 x 3.0 mm. Three groups of resonances may be distinctly observed: 100, 500, and 800 kc/sec. The results obtained by a quantitative investigation of the sample are illustrated in Fig. 2. The diagram gives the electromechanical proportionality factor as a function of the displacement voltage for various temperatures.  $k_1(U)$  forms symmetric loops at changes of the voltage from +1000 v to -1000 v and vice versa.

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The Problem of Piezo Effects in Variconds

85881

S/048/60/024/011/017/036  
B006/B055

An investigation of the frequency dependence of  $\tan \delta$  (by means of Q-meter) showed that  $\tan \delta$  has strong jumps. Further, the thickness oscillations were investigated and the thickness-piezo resonances were measured. It was found that the losses amount to only about 1/10 and that  $\tan \delta$  within the range of the thickness resonances is not greater than 10%. The nonlinearity  $N$  may be determined by  $N = C_0/C_U$ ;  $C_0$  - capacity without displacement field,  $C_U$  - with displacement field. It may be shown that the parasitic piezoelectric thickness resonances can be removed from the frequency band of operation, if the measurements of the sample are carefully adjusted to the conditions under which work is carried out. There are 3 figures. ✓

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gos. universiteta  
im. M. V. Lomonosova (Department of Physics of Moscow  
State University imeni M. V. Lomonosov)

Card 2/2

STRUKOV, B.A.; GAVRILOVA, N.D.; KOPTSIK, V.A.

Some characteristics of the ferroelectric phase transition in  
(NH<sub>4</sub>)<sub>2</sub>BeF<sub>4</sub> crystals. Kristallografiia 6 no.5:780-782 S-0 '61.  
(MIRA 14:10)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.  
(Ammonium fluoberyllate--Electric properties)

LEVCHENKO, D.N.; KHUDYAKOVA, A.D.; GAVRILOVA, N.D.

Determination of nonionizing surface active substances in aqueous solutions. Zav. lab. 2/ no. 4:408-409 '61. (MIRA 14:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva.  
(Surface active agents)